Application No.: 10/065,868

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

Listing of Claims:

1. (Currently Amended)   A method for providing custom probe arrays of biological

molecules, comprising the acts of:

receiving a first user selection from a first user of one or more probe set

identifiers that identify a first set of probe sets each probe set comprising one or more

potential probes, and an indication from the user to share a second selection from the first

user to share available space on a custom probe array design with one or more additional

users;

identifying a second set of one or more probe sets selected by the one or more

additional users;

determining one or more verified probe sets of verified probes corresponding to at

least one of the probe set identifiers;

generating the custom probe array design comprising the verified first and second

sets of probe sets, wherein the first and second sets of probe sets together comprise a

number of probe sets that is less than or equal to a total number of probe sets available for

the custom probe array design;

providing a representation of the custom probe array design to the first user via

one or more graphical user interfaces, wherein the one or more graphical user interfaces

2

Application No.: 10/065,868

are enabled to receive a user selection specifying acceptance, modification, or rejection of

the custom probe array design; and

     providing to the <u>first</u> user one or more probe arrays ~~based on~~ <u>produced using</u> the

custom probe array design, and responsive to the user specification of acceptance or

modification, wherein at least one ~~of the~~ probe detects nucleic acids.

2. (Currently Amended)   The method of claim 1, wherein:

     one or more of the probe arrays is ~~enabled to diagnose~~ <u>capable of diagnosing</u> a

disease and/or medical condition.

3. (Cancelled)

4. (Currently Amended)   The method of claim 1, wherein:

     the one or more ~~probe arrays comprise~~ probes <u>are</u> capable of hybridizing with

biological molecules.

5. (Currently Amended)   A method for providing custom probe arrays, comprising

~~the acts of~~:

     receiving a <u>first</u> ~~user~~ selection <u>from a first user</u> of one or more probe set

identifiers that identify <u>a first set of probe sets each probe set comprising</u> one or more

~~potential~~ probes, and ~~an indication from the user to share~~ a <u>second selection from the first</u>

<u>user to share available space on a</u> custom probe array design with one or more additional

users;

3

Application No.: 10/065,868

identifying a second set of one or more probe sets selected by the one or more

additional users;

~~determining one or more verified probe sets of verified probes corresponding to at~~

~~least one of the probe set identifiers;~~

generating the custom probe array design comprising the ~~verified~~ first and second

sets of probe sets, wherein the first and second sets of probe sets together comprise a

number of probe sets that is less than or equal to a total number of probe sets available for

the custom probe array design;

providing a representation of the custom probe array design to the first user via

one or more graphical user interfaces, wherein the one or more graphical user interfaces

arc ~~enabled to receive~~ capable of receiving a third ~~user~~ selection from the first user

specifying acceptance, modification, or rejection of the custom probe array design; and

providing to the first user one or more probe arrays ~~based on the~~ produced using

the custom probe array design and responsive to the user specification of acceptance or

modification.

6. (Currently Amended)   The method of claim 5, wherein:

the first, second, and third user ~~selection is~~ selections are received over the

Internet.

7. (Original)   The method of claim 5, wherein:

the probe set identifiers comprise sequence information.

4

Application No.: 10/065,868

8. (Currently Amended)   The method of claim 5, wherein:

    the probe set identifiers are selected by the <u>first</u> user from a predetermined list.

9. (Previously Presented)   The method of claim 8, wherein:

    each item on the list corresponds to a gene.

10. (Cancelled)

11. (Previously Presented)   The method of claim 5, wherein:

    the custom probe array design is generated using one or more probe array format

factors.

12. (Currently Amended)   The method of claim 11, wherein:

    some or all of the probe array format factors are provided by the <u>first</u> user and the

act of receiving includes receiving ~~user-selected~~ <u>a fourth selection of the</u> probe array

format factors <u>from the first user</u>.

13. (Previously Presented)   The method of claim 11, wherein:

    the probe array format factors include one or more indicators of geographic

dispersion of probe sets on the probe array.

14. (Currently Amended)   The method of claim <u>5</u>[[13]], wherein:

5

Application No.: 10/065.868

the one or more probe arrays comprise substrate material includes one or more

selected from the group consisting of glass, silica, optical fibers, beads, resins, gels, or

microspheres.

15. (Currently Amended)   The method of claim 11[[13]], wherein:

the act of generating further includes modifying or rejecting one or more user-

selected probe array format factors.

16. (Original) The method of claim 5, further comprising the act of:

the graphical user interface is provided over a network.

17. - 18. (Cancelled)

19. (Currently Amended)   A system for providing custom probe arrays, comprising:

an input manager that receives a first user selection from a first user of one or

more probe set identifiers that identify a first set of probe sets each probe set comprising

one or more potential probes, and an indication from the user to share a second selection

from the first user to share available space on a custom probe array design with one or

more additional users;

a gene or EST verifier that determines one or more verified probe sets of verified

probes corresponding to at least one of the probe set identifiers;

a probe array generator that identifies a second set of one or more probe sets

selected by the one or more additional users and generates the custom probe array design

6

Application No.: 10/065,868

comprising the ~~verified~~ <u>first and second sets of</u> probe sets, <u>wherein the first and second</u> <u>sets of probe sets together comprise a number of probe sets that is less than or equal to a</u> <u>total number of probe sets available for the custom probe array design</u>; and

a user data processor that provides a representation of the custom probe array design to the <u>first</u> user via one or more graphical user interfaces, wherein the one or more graphical user interfaces are ~~enabled to receive~~ <u>capable of receiving</u> a user selection specifying acceptance, modification, or rejection of the custom probe array design, and one or more probe arrays are provided to the <u>first</u> user ~~based on~~ <u>in response to</u> a user selection specifying acceptance or modification of the custom probe array design.

20. (Currently Amended)   The system of claim 19, wherein:

the <u>first, second and third</u> user ~~selection is~~ <u>selections are</u> received over the Internet.

21. (Original) The system of claim 19, wherein:

the probe set identifiers comprise sequence information.

22. (Currently Amended)   The system of claim 19, wherein:

the probe set identifiers are selected by the <u>first</u> user from a predetermined list.

23. (Previously Presented)   The system of claim 22, wherein:

each item on the list corresponds to a gene.

7

Application No.: 10/065.868

24. (Cancelled)

25. (Previously Presented)   The system of claim 19, wherein:

the probe array generator further generates the custom probe array design using

one or more probe array format factors

26. (Currently Amended)   The system of claim 25, wherein:

the input manager further receives some or all of the probe array format factors

from the first user, including one or more user-selected probe array format factors.

27. (Previously Presented)   The system of claim 25, wherein:

the one or more probe array format factors include one or more indicators of

geographic dispersion of probe sets on the probe array.

28. (Currently Amended)   The system of claim 27, wherein:

the one or more probe arrays comprise substrate material includes one or more

selected from the group consisting of glass, silica, optical fibers, beads, resins, gels, or

microspheres.

29. (Previously Presented)   The system of claim 27, wherein:

the probe array generator further modifies or rejects the one or more user-selected

probe array format factors.

8

Application No.: 10/065,868

30. (Original) The system of claim 19, wherein:

the graphical user interface is provided over a network.

31. - 32. (Cancelled)

33. (Currently Amended) A genomic portal system for providing custom probe arrays, comprising:

an application server comprising an input manager that receives a first user selection from a first user of one or more probe set identifiers that identify a first set of probe sets each probe comprising one or more potential probes and an indication from the user to share a second selection from the first user to share available space on a custom probe array design with one or more additional users, a gene or EST verifier that determines one or more verified probe sets of verified probes corresponding to at least one of the probe set identifiers, a probe array generator that identifies a second set of one or more probe sets selected by the one or more additional users and generates the custom probe array design comprising the verified first and second sets of probe sets, wherein the first and second sets of probe sets together comprise a number of probe sets that is less than or equal to a total number of probe sets available for the custom probe array design, and a user data processor that provides a representation to the first user of the custom probe array design via one or more graphical user interfaces, wherein the one or more graphical user interfaces are enabled to receive capable of receiving a user selection specifying acceptance, modification, or rejection of the custom probe array design, and

9

Application No.: 10/065,868

one or more probe arrays are provided to the first user ~~based on~~ in response to a user

selection specifying acceptance or modification of the custom probe array design; and

a network server comprising an output manager that provides to the first user one

or more probe arrays ~~based on~~ produced using the custom probe array design.

34. (Previously Presented)   The system of claim 33, wherein:

the network server further comprises an input manager that receives the first

selection ~~user input~~; and

the system further comprises one or more user computers that ~~enable a user to~~

~~provide~~ accepts the first ~~user~~ selection of one or more probe set identifiers from the first

user and provides the first selection to the network server.

35. (Currently Amended)   The system of claim 33, wherein:

the ~~output manager identifies~~ user data processor provides the ~~one or more~~ custom

probe ~~arrays~~ array design to the first user via the internet.

36.-83. (Cancelled)

84. (Currently Amended)   A method for providing custom probe arrays, comprising

the acts of:

receiving a first ~~user~~ selection from a first user of one or more probe set

identifiers that each identify a first set of probe sets each probe set comprising ~~plurality of~~

~~potential~~ one or more probes and ~~an indication from the user to share~~ a second selection

10

Application No.: 10/065,868

from the first user to share available space on a custom probe array design with one or

more additional users;

identifying a second set of one or more probe sets selected by the one or more

additional users:

~~determining verified probe sets of verified probes corresponding to at least one of~~

~~the probe set identifiers;~~

generating the custom probe array design comprising the ~~verified~~ first and second

sets of probe sets, wherein the first and second sets of probe sets together comprise a

number of probe sets that is less than or equal to a total number of probe sets available for

the custom probe array design; and

providing to the first user one or more probe arrays ~~based on~~ produced using the

custom probe array design.

11